GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

STARRED QUESTION NO:399
ANSWERED ON:29.03.2017
Earthquake Prediction
Maganti Shri Murali Mohan

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether any emergency response system is in place for earthquake prediction;

(b) if so, the accuracy at which it could be predicted;

(c) whether the Government has urged the Indian Scientists/ISRO to research for earthquake prediction system and if so, the details thereof;

(d) whether the Government has reached any agreement with other foreign countries for joint working on this issue; and

(e) if so, the details thereof and if not, the reasons therefor?

Answer

THE MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(DR. HARSH VARDHAN)

(a) to (e) : A statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) to (e) OF THE LOK SABHASTARRED QUESTION NO *399 REGARDING RESEARCH EARTHQUAKE PREDICTION FOR ANSWER ON 29 MARCH, 2017

(a-b) No Madam. To date, there is no proven scientific technique available, anywhere in the world, to predict the occurrence of earthquakes with reasonable degree of accuracy with regard to space, time and magnitude.

However, an Earthquake Early Warning (EEW) system exists for issuing warning based on recording of P-waves and that too after the occurrence of an earthquake. It has limited response time varying from a few seconds to little more than a minute depending on system network design in the epicentral area region and target city.

A pilot project on EEW system is under implementation for northern India (Uttarakhand) by Indian Institute of Technology (IIT) Roorkee which is funded by the Ministry of Earth Sciences (MoES). Such type of system gives a time lead for a few seconds for issue of warnings on occurrence of an earthquake, so that some remedial actions regarding vacating building, shutting down critical operations etc may be taken up.

Fully organized protocol exists between National Centre for Seismology (NCS) and the various designated disaster management authorities at the centre and state levels for dissemination of earthquake information.

(c) As part of R & D initiatives, ISRO is working on identifying earthquake precursors using space based inputs. RADAR Interferometry and studies on surface deformations related aspects using Synthetic Aperture Radar (SAR) are being explored.

(d-e) ISRO is working with the National Aeronautics and Space Administration (NASA), USA towards realization of a joint satellite mission, namely, 'NASA−ISRO'Synthetic Aperture Radar (NISAR), to be launched by 2020-21 timeframe. This will enable surface deformation and land subsidence related studies, which would be useful in earthquake related studies.